

# Master in Artificial Intelligence



## Problem Definition IV







# Purpose

**The purpose of the section is to help you learn how to define problems to become a Successful Artificial Intelligence (AI) Engineer**

**At the end of this lecture, you will learn the following**

- **An example of understanding stakeholders' needs and define problems that can be addressed using artificial intelligence and machine learning technique**



# Mapped Stakeholder Needs to AI Opportunities

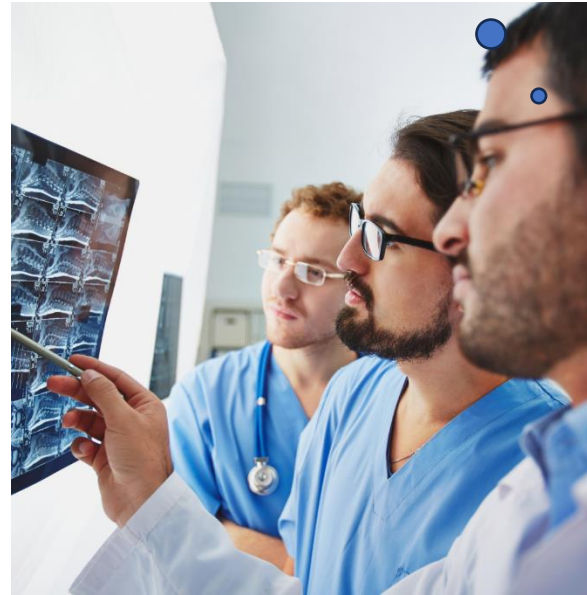
## Identified opportunities

Automated  
image  
analysis

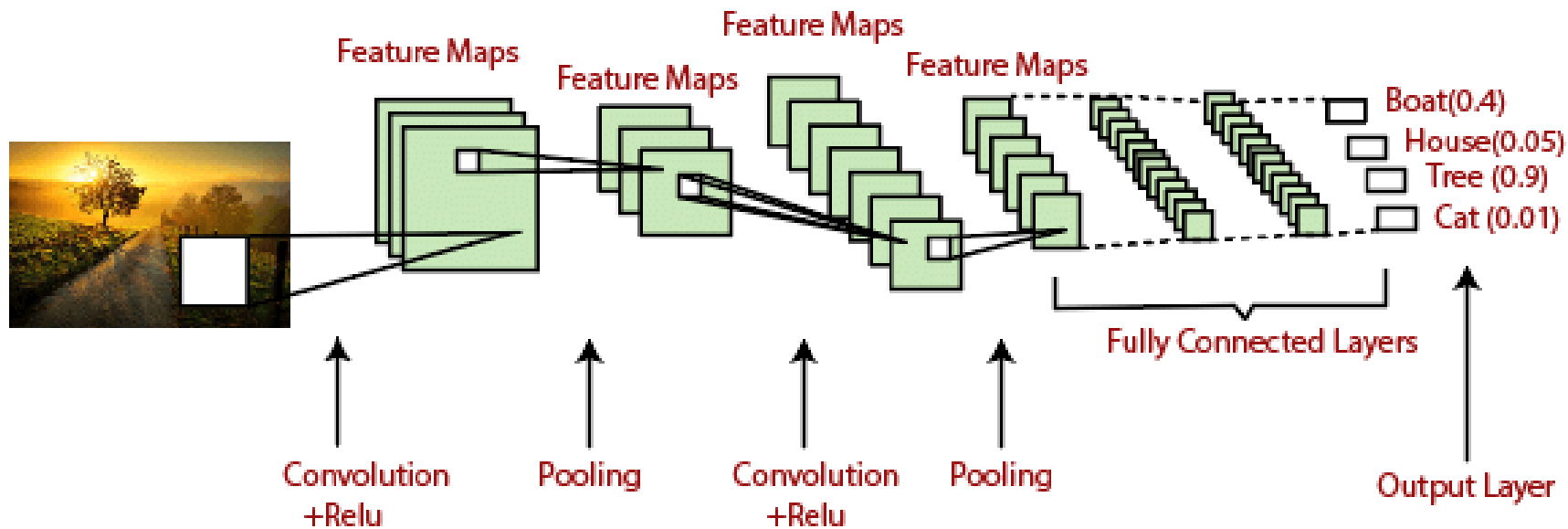
Anomaly  
detection

Decision  
support  
systems

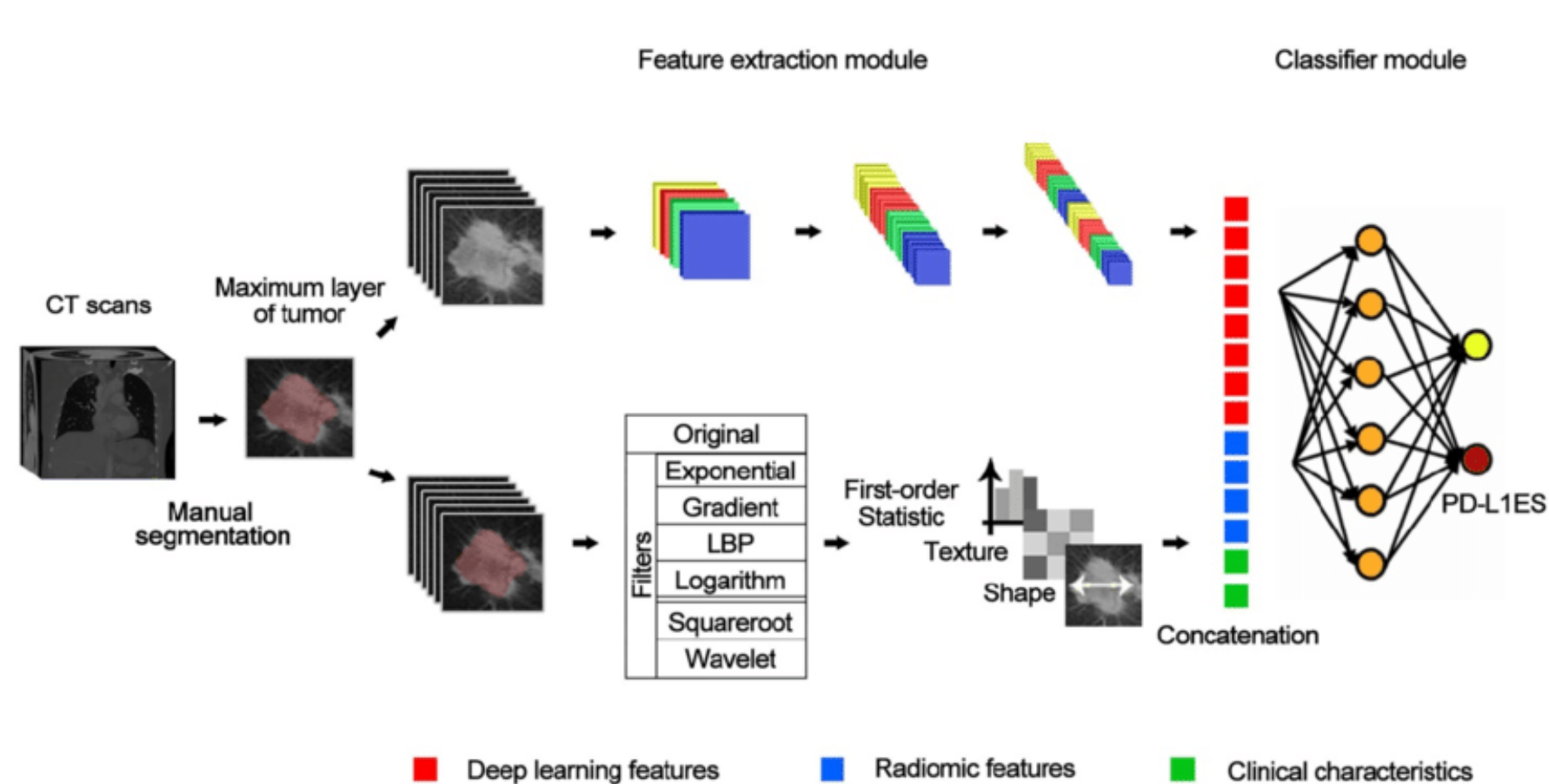
Diagnosing  
medical images  
more accurately  
and efficiently



# Mapped Stakeholder Needs to AI Opportunities



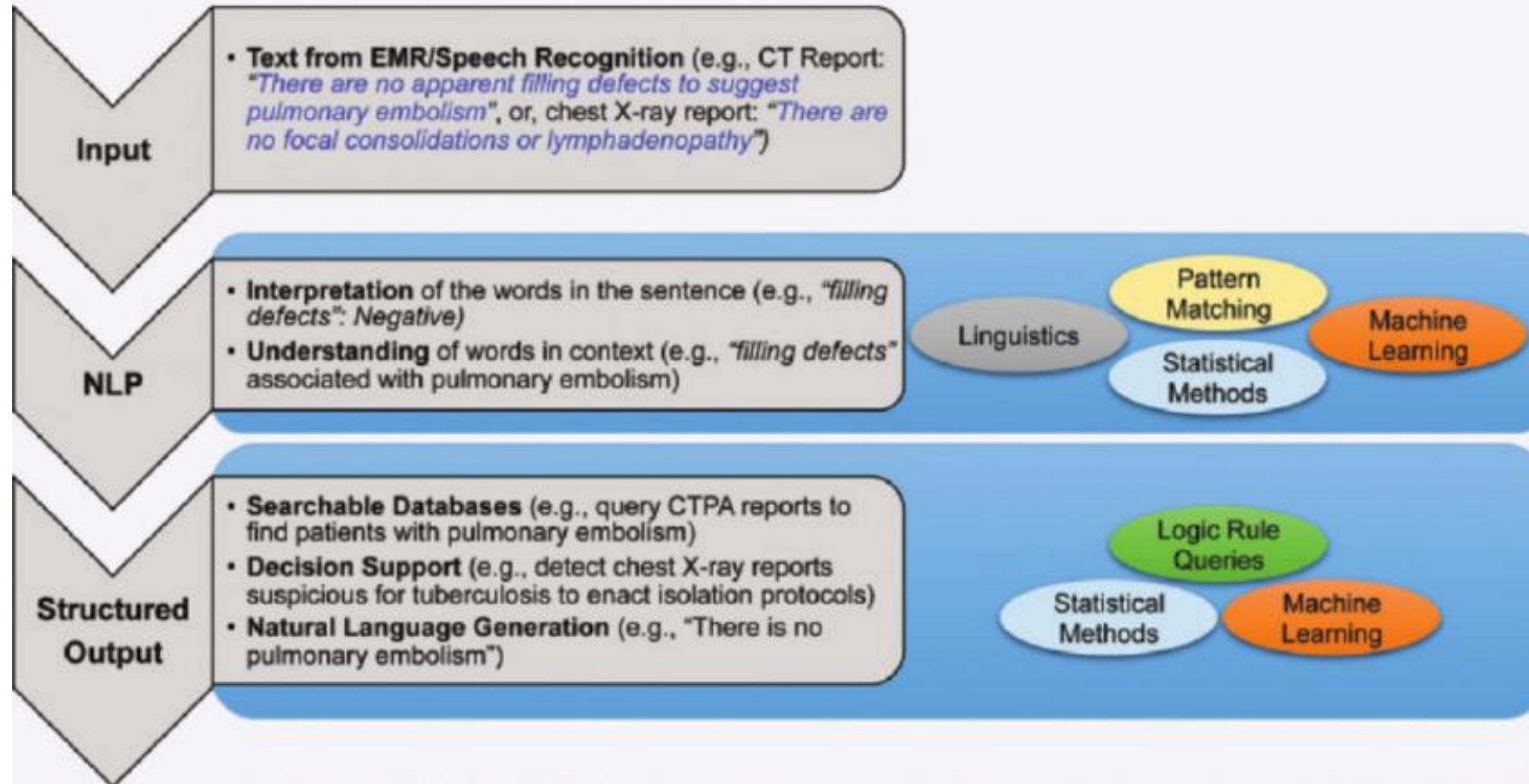
# Mapped Stakeholder Needs to AI Opportunities



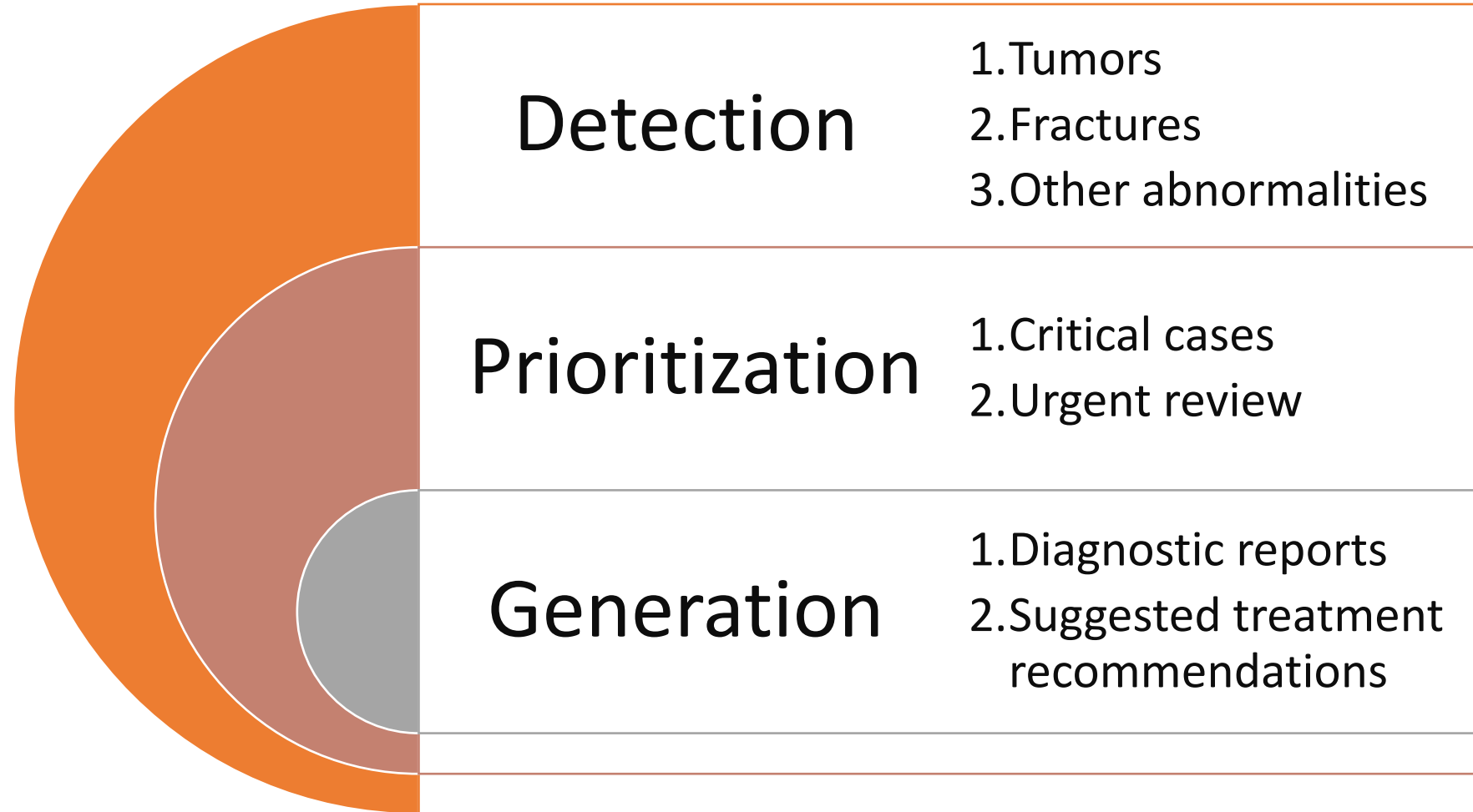


# Mapped Stakeholder Needs to AI Opportunities

## Natural Language Processing (NLP) in Radiology

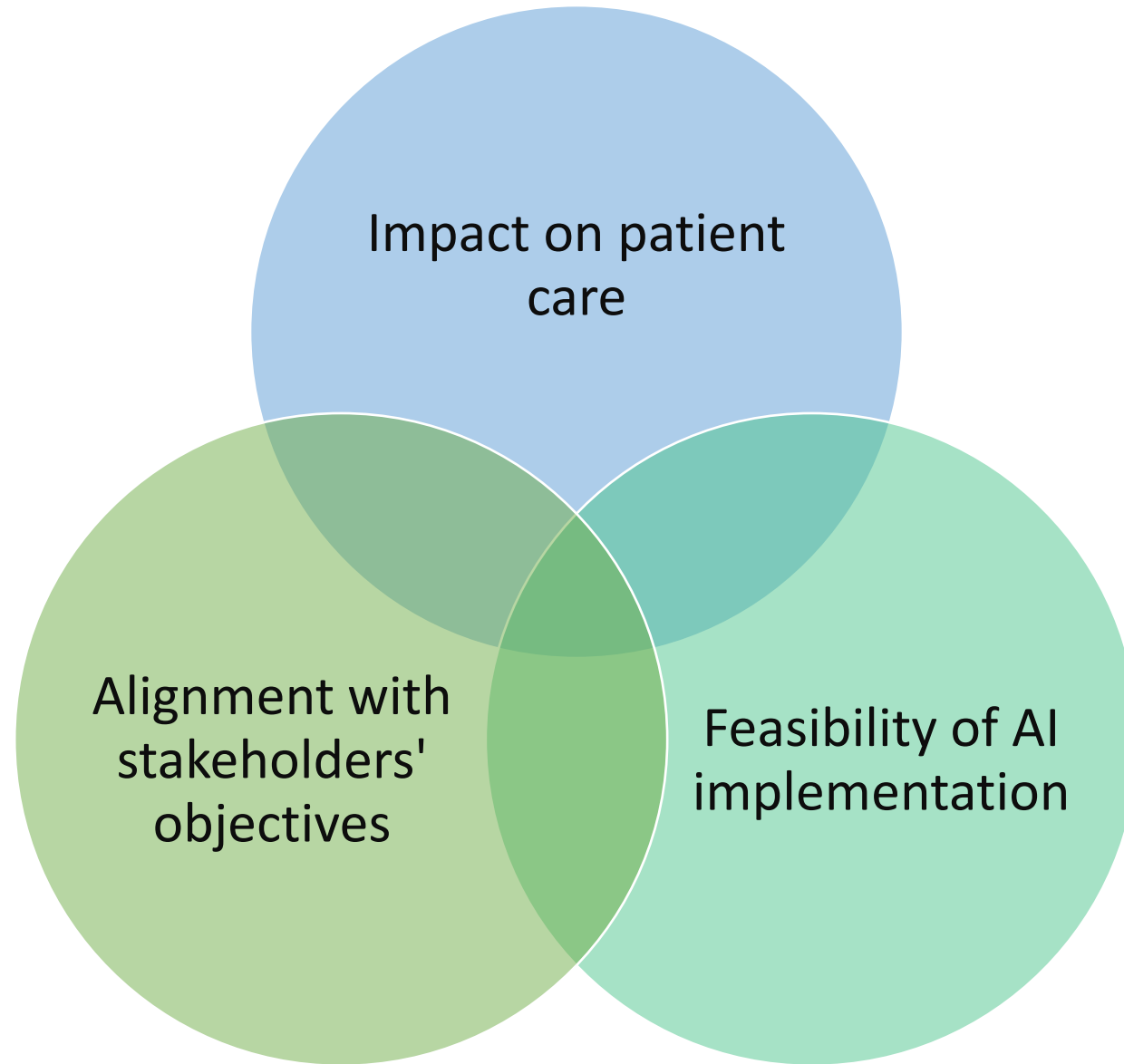


# Brainstorm potential AI solutions





# Prioritized problems



# Defined Success Metrics

Accuracy of AI-assisted diagnoses compared to human radiologists

Reduction in diagnostic errors

Improvement in patient outcomes

Time savings for radiologists



# Prototyped and Validated

## Prototyped AI algorithms

Automated image  
analysis

Diagnostic  
assistance

## Validated Prototypes

Pilot Studies

Radiologists and  
real-world  
medical imaging  
data





# Documented Requirements

Project plan/  
Requirements  
document

Stakeholder  
requirements

Technical  
specifications

Project  
objectives



# Communicated Effectively

Kept them informed  
about project progress

Addressed any concerns  
or challenges that arose  
during implementation

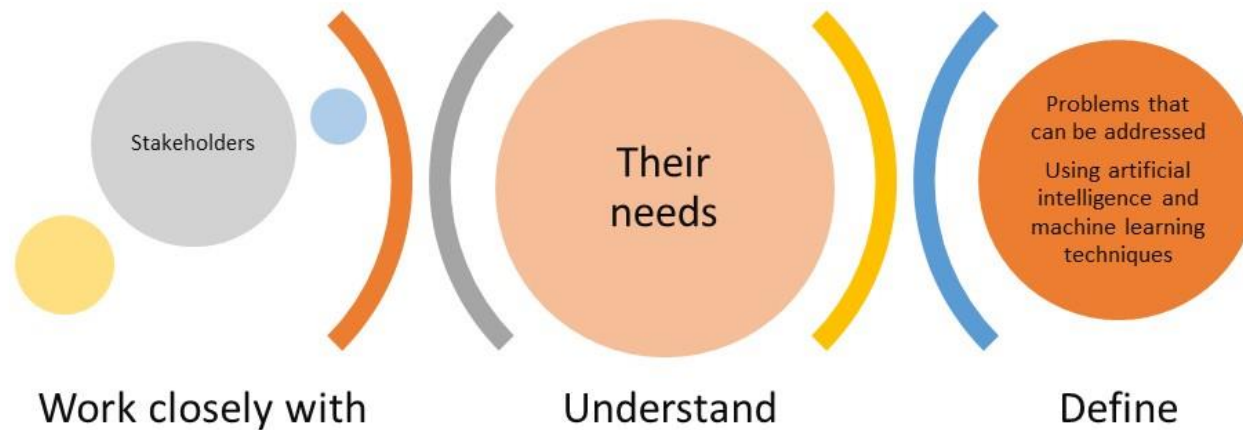
Solicited feedback



# An example of understanding stakeholders' needs and define problems

## Problem Definition

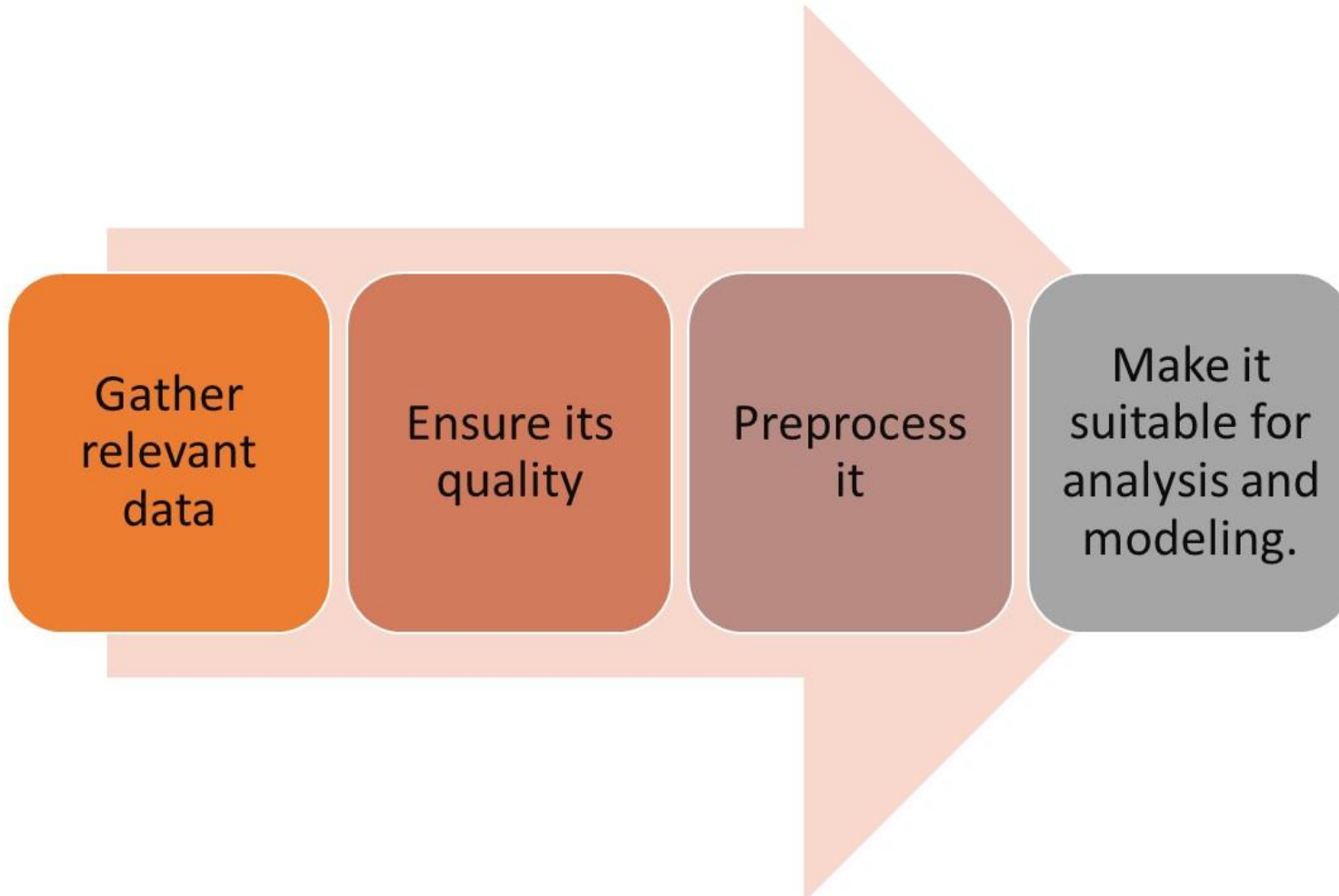
Example: Improving Patient Diagnostics in Radiology





# What is next?

## Data Collection and Preprocessing



# Master in Artificial Intelligence



## Problem Definition IV

